

REMARKS

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the final Office Action of November 29, 2005 (hereinafter "Final Action"). In the interest of brevity, Applicants remarks herein focus on the Response to Arguments section in the Final Action. For completeness, Applicants incorporate herein their arguments from the Request for Reconsideration filed September 2, 2005. Applicants respectfully request that the Examiner take one final look at independent Claims 1 and 11 in light of the remarks included herein. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

Independent Claims 1 and 11 are Patentable

Claims 1 and 11 stand rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 3,469,837 to Heilig (hereinafter "Heilig"). (Final Action, page 2). Independent Claim 1 is directed to an optical projection system and recites, in part:

...
a second image source that is configured to generate a second array of image pixels; and
a second lens assembly that is configured to project the second array of image pixels onto the non-planar surface such that the first array of image pixels and the second array of image pixels overlap along a single edge and a combination of the first array of image pixels and the second array of image pixels covers a continuous, 180 degree portion of the non-planar surface.

In particular, Claim 1 recites that the first and second arrays of image pixels overlap along a single edge and cover a continuous, 180-degree portion of the non-planar surface. Independent Claim 11 includes similar recitations.

FIG. 2 of Heilig shows a concave viewing screen in which the image pixels projected from projectors 19 and 20 do not overlap at all. For example, projector 19 is shown as projecting a narrow array of image pixels substantially horizontally in a first position and another narrow array of image pixels that strikes the concave surface 10 near the label 10b in a second position. Projector 20 is shown as projecting a narrow array of image pixels that strikes the concave surface

10 near the bottom loudspeaker 13. Thus, in sharp contrast with the recitations of Claims 1 and 11, the arrays of image pixels that can be projected from projectors 19 and 20 of Heilig do not cover a continuous 180-degree portion of the non-planar surface.

The Final Action cites projectors 33a and 33b as being equipped with wide-angle 170 - 180 degree lenses. (Final Action, page 9; Heilig, col. 5, lines 35 - 40). Applicants submit, however, that nowhere does Heilig disclose or suggest that the projectors 33a and 33b and/or 19 and 20 project first and second arrays of image pixels that cover a continuous, 180-degree portion of a non-planar surface. Instead, Heilig explains that the image reflected from the hemispherical screen fills only 170 degrees of a spectator's horizontal vision (Heilig, col. 2, lines 62 - 67; *see also*, col. 3, lines 60 - 64). Moreover, nowhere does Heilig disclose or suggest angling the projectors 33a and 33b and/or 19 and 20 and adjusting their projection lenses to ensure that the image pixels projected therefrom overlap only along a single edge.

For at least these reasons, the Applicant respectfully submits that Claims 1 and 11 are patentable over the cited references and that dependent Claims 2 - 9 and 12 - 14 are patentable for at least the reason that they depend from an allowable claim.

Double Patenting

Independent Claims 1 and 11 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 - 34 U. S. Patent No. 6,880,939 to Colucci et al. (hereinafter "Colucci") in view of Heilig. (Final Action, page 8). The Final Action states that Colucci does not disclose the first and second arrays of image pixels overlapping along a single edge, but maintains that Heilig provides the missing teaching. (Final Action, page 8). Applicants respectfully disagree. As discussed above with respect to the rejection under 35 U.S.C. §102(b), the arrays of image pixels that can be projected from projectors 19 and 20 and/or 33a and 33b of Heilig do not cover a continuous 180-degree portion of the non-planar surface. Instead, the image reflected from the hemispherical screen covers only 170 degrees of a spectator's horizontal vision. Moreover, nowhere does Heilig disclose or suggest angling the projectors 33a and 33b and/or 19 and 20 and adjusting their projection lenses to ensure that the image pixels projected therefrom overlap only along a single edge. The Final Action alleges that it would be obvious to overlap the first and second arrays of image pixels along a single edge to avoid

In re: Colucci et al.
Serial No.: 10/665, 162
Filed: September 17, 2003
Page 7 of 8

discontinuity in the image. (Final Action, pages 8 and 9). Applicants agree that it would be desirable to avoid discontinuity in the image on the screen, but the Final Action does not point to any passage of Heilig that suggests the desirability of overlapping two arrays of image pixels along a single edge as recited in the independent claims versus an overlap at oblique angles as taught, for example, in U. S. Patent No. 2,280,206 to Waller et al., which was cited in the Office Action of December 7, 2004. Applicants respectfully submit, therefore, that the cited references in combination fail to disclose or suggest all elements of the independent Claim.

For at least these reasons, the Applicant respectfully submits that Claims 1 and 11 are patentable over the cited references and that dependent Claims 2 - 9 and 12 - 14 are patentable for at least the reason that they depend from an allowable claim.

In re: Colucci et al.
Serial No.: 10/665, 162
Filed: September 17, 2003
Page 8 of 8

CONCLUSION

In light of the above remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,

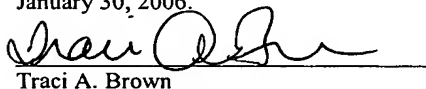


D. Scott Moore
Registration No. 42,011

Myers Bigel Sibley & Sajovec, P.A.
P. O. Box 37428
Raleigh, North Carolina 27627
Telephone: (919) 854-1400
Facsimile: (919) 854-1401
Customer No. 20792

Certificate of Mailing under 37 CFR 1.8 (or 1.10)

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on January 30, 2006.



Traci A. Brown